WHAT IS CLAIMED IS:

1. A drive controlling apparatus for an automotive vehicle, comprising:

at least one couple of road wheels that constitutes one pair of parallel road wheels with respect to a vehicular width direction located on the same axis of the vehicular width direction;

a plurality of motors driving independently and separately each road wheel of the pair of parallel road wheels; and

a power supply to supply an electric power to the plurality of motors, the plurality of motors driving respective road wheels of the pair of parallel road wheels being enabled to constitute a serial circuit with respect to the power supply.

2. A drive controlling apparatus for an automotive vehicle as claimed in claim 1, wherein the vehicle is equipped with an internal combustion engine and the power supply comprises a generator driven by a power of the internal combustion engine.

3. A drive controlling apparatus for an automotive vehicle as claimed in claim 1, further comprising: a driving force difference detecting section that detects a difference in a driving force on each of the road wheels which constitutes the pair of parallel road wheels from among the road wheels driven by means of the respective motors; and a field current correcting section that corrects a field current value of each motor driving the pair of

parallel road wheels on the basis of the driving force difference.

4. A drive controlling apparatus for an automotive vehicle as claimed in claim 3, wherein the field current correcting section corrects the field current value of each motor connected to a corresponding one of the pair of parallel road wheels to make the driving forces of the pair of parallel road wheels equal to each other on the basis of a detection result of the driving force difference detecting section when the vehicle is determined to travel in a straight line.

5. A drive controlling apparatus for an automotive vehicle as claimed in claim 4, wherein the field current correcting section corrects the field current value of each motor connected to the corresponding one of the pair of parallel road wheels in such a manner as to relatively reduce the field current value of one of the motors disposed for the corresponding one of the pair of parallel road wheels on which a large driving force is developed and to raise the field current value of the other of the motors disposed for the other of the pair of parallel road wheels on which a small driving force is developed.

6. A drive controlling apparatus for an automotive vehicle as claimed in claim 5, wherein the field current correcting section corrects the field current value for each motor connected to a corresponding one of the pair of parallel road wheels at the same

timing in such a manner that absolute values of respective field current values of the respective motors is made equal to each other.

7. A drive controlling apparatus for an automotive vehicle as claimed in claim 1, wherein the plurality of motors driving respective road wheels of the pair of parallel road wheels are enabled to constitute a parallel circuit with respect to the power supply and wherein the drive controlling apparatus further comprises: a circuit switching section that selectively sets an electrical connection of the plurality of motors with respect to the power supply to one of the parallel circuit and the serial circuit; and a circuit switching control section that controls the circuit switching section to set the electrical connection of the plurality of motors with respect to the power supply to one of the parallel circuit and the serial circuit in accordance with at least one of a travel state of the vehicle and a manipulation for the vehicle.

8. A drive controlling apparatus for an automotive vehicle as claimed in claim 7, wherein the drive controlling apparatus further comprises a vehicular turning determining section that determines whether a travel state of the vehicle is a turning state and the circuit switching control section controls the circuit switching control section to select the serial circuit when the vehicular turning determining section determines that the travel state of the vehicle is turned.

9. A drive controlling apparatus for an automotive vehicle as claimed in claim 7, wherein the drive controlling apparatus further comprises an oversteering tendency determining section that determines whether the vehicle indicates a tendency of an oversteering and wherein the circuit switching control section controls the circuit switching section to select the parallel circuit when the oversteering tendency determining section determines that the vehicle indicates the tendency of the oversteering.

10. A drive controlling apparatus for an automotive vehicle as claimed in claim 7, wherein the drive controlling apparatus further comprises an acceleration slip detecting section that detects a presence or an absence of each acceleration slip of left and right road wheels driven by means of the individual motors and wherein the circuit switching control section controls the circuit switching section to select the parallel circuit when the acceleration detecting section detects that only one of the pair of parallel road wheels is in an acceleration slip state.

11. A drive controlling apparatus for an automotive vehicle as claimed in claim 7, wherein the drive controlling apparatus further comprises a selective operation section that is selectable one of the parallel circuit and the serial circuit according to a manipulation thereof and wherein the circuit switching control section controls the circuit switching section to select one of the parallel and

serial circuits according to the manipulation of the selective operation section.

12. A drive controlling apparatus for an automotive vehicle as claimed in claim 7, wherein one of front and rear road wheels of the vehicle is driven by means of an internal combustion engine equipped in the vehicle, the other of the front and rear road wheels is driven by means of the plurality of motors, and the power supply comprises a generator driven by means of a power of the internal combustion engine.

13. A drive controlling apparatus for an automotive vehicle as claimed in claim 1, wherein the pair of parallel road wheels are constituted by rear left and right road wheels and wherein front left and right road wheels are driven by means of an internal combustion engine of the vehicle and the power comprises a generator driven by means of a power of the internal combustion engine.

14. A drive controlling apparatus for an automotive vehicle as claimed in claim 13, wherein each of the pair of parallel road wheels which are rear left and right road wheels is directly coupled to a drive axle of a corresponding one of the motors via a clutch and a speed reducer.

15. A drive controlling apparatus for an automotive vehicle as claimed in claim 14, wherein the drive controlling apparatus further comprises a front road wheel acceleration slip detecting section

that detects an acceleration slip of each of front left and right road wheels and wherein the clutch of each of the rear left and right road wheels is engaged, the generator generates an electrical power by a generator load torque (Th) according to an acceleration slip quantity for the vehicle to be transferred into a four-wheel drive state, and, thereafter, a drive torque transmitted to each of the front left and right road wheels is adjusted to approach to a road surface reaction force limit torque for the vehicle to be transferred into a two-wheel drive state when the acceleration slip detecting section detects the acceleration slip.

16. A drive controlling apparatus for an automotive vehicle as claimed in claim 3, wherein the driving force difference detecting section detects the difference in the driving force on front left and right road wheels driven by means of a power of an internal combustion engine equipped in the vehicle and the pair of parallel road wheels are rear left and right road wheels and wherein the driving force difference detecting section detects the difference in the driving force according to at least one of a difference between a target yaw rate and an actual yaw rate and a difference between drive torques of the front left and right road wheels.

17. A drive controlling apparatus for an automotive vehicle as claimed in claim 1, wherein front left and right and rear left and right road wheels are constituted by the pairs of parallel road wheels and each motor connected to a corresponding one of the

front left and right and rear left and right road wheels is connected in series with the power supply.

18. A drive controlling apparatus for an automotive vehicle as claimed in claim 1, wherein front left and right road wheels are constituted by the pair of parallel road wheels and rear left and right road wheels are constituted by another pair of parallel road wheels and wherein the motors serially connected to the front left and right road wheels and other motors serially connected to the rear left and right road wheels are connected in parallel to each other.

19. A drive controlling apparatus for an automotive vehicle, comprising:

road wheel means for constituting one pair of parallel road wheels with respect to a vehicular width direction located on the same axis of the vehicular width direction;

motor means for driving independently and separately the road wheel means of the pair of parallel road wheels; and

power supply means for supplying an electric power to the motor means, the motor means driving the road wheel means of the pair of parallel road wheels being enabled to constitute a serial circuit with respect to the power supply means.

20. A drive controlling method for an automotive vehicle, comprising:

providing at least one couple of road wheels that constitutes one pair of parallel road wheels

with respect to a vehicular width direction located on the same axis of the vehicular width direction;

providing a plurality of motors driving independently and separately each road wheel of the pair of parallel road wheels;

providing a power supply supplying an electric power to the plurality of motors; and

enabling the plurality of motors driving respective road wheels of the pair of parallel road wheels to constitute a serial circuit with respect to the power supply.